SPRING 2017 SEMINAR SERIES

Annual Ludwick Lecture in honor of Professor Jack C. Ludwick

DEPARTMENT OF OCEAN, EARTH, AND ATMOSPHERIC SCIENCES
3:00PM – ROOM 200 IN THE OCEANOGRAPHY/PHYSICS BUILDING
THURSDAY April 13th, 2017

"Protistan Microzooplankton and the Trophic Position of Tuna: New Insights from Compound-Specific Isotope Analyses of Amino Acids."

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ABSTRACT

Resolving trophic structure is essential for understanding food web relationships and energy flows in the oceans and their sensitivities to natural variability and climate change. The problem is that marine microbial ecology (counting from the bottom up) and fisheries-based research (counting from the top down) give dramatically different estimates of the likely number of steps in ocean food webs. One major discrepancy is the steps associated with protistan microzooplankton (protozoan consumers), which have well-demonstrated importance in experimental studies and constrained global ocean budgets but are virtually ignored in fisheries trophic research. Compound Specific Isotopic Analysis of Amino Acids (CSIA-AA), a recently developed technique based on the differential [illegible]15N enrichmen[illegible]ffers some promise for bringing these divergent perspectives together, but it is not without it's own thorny issues. Using tuna as an example, I will illustrate how CSIA-AA can be used to best advantage in combination with fish dietary techniques to constrain the mean trophic positions of high-level consumers in marine systems.

AFTER THE SEMINAR, PLEASE JOIN US IN ROOM 404, THE ZANEVELD CONFERENCE ROOM, FOR COFFEE AND COOKIES, AND TO MEET WITH THE SEMINAR SPEAKER.